

DE/AFS(SF  
C: Bill R. (2)



**RILEY CREEK**

**Chilco Lake Lumber Company, LLC**

September 30, 2005

Mr. William Rogers,  
Title V Permit Coordinator  
**Idaho Dept. of Environmental Quality**  
1410 North Hilton  
Boise, ID 83706-1255

Re: Tier 1 Permit Application for Chilco Lake Lumber Co., LLC  
dba Riley Creek Chilco Sawmill, P-050116, Kootenai County

Dear Mr. Rogers:

Riley Creek Lumber Co. is pleased to submit the enclosed Tier 1 Operating Permit Application as required by IDAPA 58.01.01.313.b.

Based on information and belief formed after reasonable inquiry, the statements and information in these documents are true, accurate, and complete. If you have any technical questions about this application, please contact Riley Creek's Environmental Manager, Glenda Empsall 208-772-0505 extension 438, or cell 208-661-2644.

Sincerely,

Marc A. Brinkmeyer,  
President

cc: Mr. Tom Harman, Air Quality Program Manager  
**Idaho Department of Environmental Quality**  
2110 Ironwood Parkway  
Coeur d'Alene, Idaho 83814

Permit No.

T1-050123

Facility ID No.

055-00024

PID:

SSIV.1088

Logged: ☒

RECEIVED

SEP 30 2005

Department of Environmental Quality  
State Air Program

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**COMPLETENESS DETERMINATION CHECKLIST**  
**AND APPLICATION INDEX**

**Company Name** Chilco Lake Lumber Compay, LLC -- dba Riley Creek -- Chilco Sawmill

**Location** Athol, Idaho

**Project** Tier I Operating Permit Application

**Reviewer** \_\_\_\_\_

The attached forms have been provided as a checklist and application index, to ensure all the required information has been included with the air pollution permit application. These forms shall be submitted along with the application. These checklist/index forms include the following elements of the permit application:

- ▶ Application Forms
- ▶ Source Descriptions
- ▶ Source Flow Diagrams
- ▶ Plot Plans
- ▶ Emission Estimate References and Documentation
- ▶ Excess Emission Documentation - **Not Required**
- ▶ Ambient Air Impact Analysis - **Not Required**
- ▶ Compliance Certification Plan

Each page of the permit application shall be numbered so that each page can be referenced individually. This will allow these checklist forms to act as the permit application table of contents.

## APPLICATION FORMS

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	No Section 4 forms are included.	
<b>5</b>	<b>Storage and Handling of Liquid Solvents</b>	
	No Section 5 forms are included.	
<b>6</b>	<b>Loading Racks</b>	
	No Section 6 forms are included.	

# APPLICATION FORMS (continued)

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	Permit No.: P-050116, with attachments	

	<u>YES</u>	<u>NO</u>
► Is the application signed and dated?	_____	_____
► Are all the forms adequately completed?	_____	_____

## SOURCE DESCRIPTIONS

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<u>10. Planer Shavings and Chip Handling</u>	<u>1 - 3</u>
<u>11. Unpaved Road Dust Sources</u>	<u>NA</u>
<u>12. Paved Road Dust Sources</u>	<u>NA</u>

	<u>YES</u>	<u>NO</u>
▶ Are the existing facilities described?	<u>          </u>	<u>          </u>
▶ Are the modifications or new facilities described?	<u>  NA  </u>	<u>  NA  </u>
▶ Are all applicable processes, materials, ventilation, and controls described?	<u>          </u>	<u>          </u>
▶ Are all the equipment referenced by specific ID name or number?	<u>          </u>	<u>          </u>

## SOURCE FLOW DIAGRAMS

<u>SOURCE</u>	<u>PAGE</u>
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<u>10. Planer Shavings and Chip Handling</u>	<u>1 – 8</u>
<u>11. Unpaved Road Dust Sources</u>	<u>NA</u>
<u>12. Paved Road Dust Sources</u>	<u>NA</u>

	<u>YES</u>	<u>NO</u>
▶ Are included?	<u>          </u>	<u>          </u>
▶ Shows the entire existing facility?	<u>          </u>	<u>          </u>
▶ Shows the entire future facility?	<u>NA</u>	<u>NA</u>
▶ Shows each process separately (if needed)?	<u>          </u>	<u>          </u>
▶ Details storage, roads, transfers, and processing?	<u>          </u>	<u>          </u>
▶ Labeling is adequate (processes and stacks identified, flow rates and process rates shown)?	<u>          </u>	<u>          </u>

## PLOT PLANS

<u>SOURCE</u>	<u>PAGE</u>
<u>1. Hog Fuel Boiler</u>	<u>1-7</u>
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<u>11. Unpaved Road Dust Sources</u>	<u>NA</u>
<u>12. Paved Road Dust Sources</u>	<u>NA</u>

	<u>YES</u>	<u>NO</u>
▶ Are included?	_____	_____
▶ Shows location coordinates?	_____	_____
▶ Shows plant boundaries?	_____	_____
▶ Shows neighboring ownership and facilities?	_____	_____
▶ Shows topography?	_____	_____
▶ Scale shown or distances adequately labeled?	_____	_____
▶ Shows all buildings, equipment, storage and roads?	_____	_____
▶ Is adequate for both existing and future or includes both?	_____	_____



## EMISSION ESTIMATE REFERENCES AND DOCUMENTATION

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<u>10. Planer Shavings and Chip Handling</u>	<u>7 – 10</u>
<u>11. Unpaved Road Dust Sources</u>	<u>8 – 3</u>
<u>12. Paved Road Dust Sources</u>	<u>8 – 6</u>

	<u>YES</u>	<u>NO</u>
▶ All fugitive and point sources listed?	_____	_____
▶ All pollutants addressed?	_____	_____
▶ Process documentation and specs included?	_____	_____
▶ Control equipment documentation and specs included?	_____	_____
▶ Emission factors documented and referenced?	_____	_____
▶ Calculations and assumptions shown?	_____	_____
▶ Source tests referenced (test includes processing and control device test conditions)?	_____	_____

## COMPLIANCE CERTIFICATION PLAN

<u>SOURCE</u>	<u>PAGE</u>
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<u>2. Debarker</u>	<u>9 – 13</u>
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<u>4. Sawmill Processes</u>	<u>9 – 13</u>
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<u>12. Paved Road Dust Sources</u>	<u>9 – 13</u>

	<u>YES</u>	<u>NO</u>
▶ Monitoring, record keeping, and reporting discussed?	_____	_____
▶ Stack testing methods thoroughly documented?	_____	_____
▶ Discussion and documentation of process control mechanisms used to meet emission limits?	_____	_____
▶ Quality assurance/quality control discussed?	_____	_____
▶ Monitoring equipment specs and documentation included?	_____	_____

# SECTION 1: GENERAL INFORMATION

COMPANY & DIVISION NAME Chilco Lake Lumber Company, LLC - dba Riley Creek - Chilco Sawmill

STREET ADDRESS OR P.O. BOX 4447 E. Chilco Road

CITY Athol

STATE ID ZIP 83801

PERSON TO CONTACT Marc A. Brinkmeyer

TITLE President

PHONE NUMBER (208) - 263-7574

EXACT PLANT LOCATION SE 1/4, Section 7, Township 52 North, Range 3 West

GENERAL NATURE OF BUSINESS Sawmill

NUMBER OF FULL-TIME EMPLOYEES 140

PROPERTY AREA (ACRES) 280

REASON FOR APPLICATION 5

(1) Permit to Construct a new facility;  
 (2) Permit to Modify an existing source;  
 (3) Permit to Construct a new source at an existing facility;  
 (4) Change of Owner or Location;  
 (5) Tier I Permit to Operate;  
 (6) Tier II Permit to Operate

DISTANCE TO NEAREST STATE BORDER (MILES) 20

PRIMARY SIC 2421

PLANT LOCATION COUNTY Kootenai

UTM ZONE 11

UTM (X) COORDINATE (KM) 519.0 E

SECONDARY SIC

ELEVATION (FT) 2306

UTM (Y) COORDINATE (KM) 5301.0 N

## NAME OF FACILITIES

List all facilities within the state that are under your control, or under common control, and have emissions to the air. If none, so state

Riley Creek Lumber Company

Riley Creek - Moyie Springs

Riley Creek - Bonners Ferry

## LOCATION OF OTHER FACILITIES

Laclede, Idaho

Moyie Springs, Idaho

Bonners Ferry, Idaho

Marc A. Brinkmeyer

President

OWNER OR RESPONSIBLE OFFICIAL

TITLE OF RESPONSIBLE OFFICIAL

Based on information and belief formed after reasonable inquiry, I certify the statements and information in this document are true, accurate, and complete.

SIGNATURE OF OWNER OR RESPONSIBLE OFFICIAL

DATE

29-Sep-05

## **Source Description**

### **Description of Site:**

Riley Creek Lumber Company (Riley Creek) owns and operates a sawmill facility near Chilco, Idaho. The Riley Creek - Chilco Sawmill facility is located west of Highway 95, near Althol, Idaho in Kootenai County. Universal Transverse Mercator (UTM) coordinates for this site are Zone 11, Easting 219.0 kilometers, and Northing 5,301.0 kilometers. The Chilco sawmill site is located in the SE1/4 of Section 7, Township 52 North, Range 3 West. The site elevation is approximately 2,300 feet above sea level. Figure 1 is a site location map. Figure 2 is a site plan of the Chilco Sawmill.

### **Summary of the Process:**

The primary processes at the facility are the sawmill, steam plant, dry kilns and the planer mill. Logs are debarked, then cut to dimension in the sawmill. Green lumber from the sawmill is dried in the dry kilns and planed in the planer mill. Finished lumber is packaged and shipped by truck and rail. Bark from the debarker is hogged and transferred to the boiler for use as fuel. A plant flow diagram is shown on Figure 1.

The sawmill includes a debarker, bark hog, and hogged bark transfer to the boiler. The debarker strips bark from the logs and the bark hog shreds it into hog fuel. Emissions from the debarker are controlled using water spray when the temperatures are above freezing. The spray provides highly efficient particulate control when in use. The hog is enclosed and emissions are minimal. A pneumatic conveyor transports hogged bark to the hog fuel cyclone/filter. The cyclone transfers hog fuel either to the truck bin for sales or the fuel house to be transferred to the boiler.

The sawing operations are located in the sawmill building. Sawmill operations produce wood scraps and sawdust. A chipper cuts the wood scraps into marketable chips and screens out the fine material. Fine material that falls through the chipper screen is added to the sawdust. A pneumatic conveyor transfers the sawdust from the building to a target box on the outdoor sawdust truck bin. Pneumatic transfer is also used to move the sawmill chips to the chip bin target box.

Riley Creek's Chilco facility includes four lumber drying kilns. The kilns are heated via indirect steam heat supplied by the hog fuel boiler. Initial moisture content of the lumber is in the range of 40-60%. The final moisture varies depending on species and product, but is generally around 10%. Moisture that is driven out of the lumber is released from the dry kilns through multiple roof vents. Each of the four kilns two rows of eleven vents. The vents are opened and closed as needed to control the temperature and moisture within the kiln. Batch drying cycles in the dry kilns can last for 30 to 60 hours.

The planers and associated equipment are located in the planer building. Air quality within the planer building is controlled with negative air, so there are minimal emissions from the planer facility. Planer shavings are transported pneumatically from the planer building to a cyclone on the shavings bin. The cyclone separates the shavings from the air stream and drops them into the bin. Cyclone exhaust is further cleaned by the planer shavings baghouse, which exhausts back into the planer building. The planer facility also includes a chipper, located inside the building. Planer chips are transferred pneumatically to the planer chip bin. Exhaust from the chip conveyor is vented through the baghouse.

Riley Creek's hog fuel boiler is a Kipper and Sons spreader stoker boiler rated for 75,000 pounds of steam per hour. The hog-fuel boiler has the potential to emit particulate matter (PM and  $PM_{10}$ ), nitrogen oxides, carbon monoxide, sulfur dioxide, volatile organic compounds and trace hazardous air pollutants. Generation of nitrogen oxides and carbon monoxide emissions is controlled through boiler design. Sulfur dioxide and VOC emissions are low from hog fuel boilers, based on the composition of the fuel.

Particulate emissions from the boiler are routed to a high efficiency multiclone. Ash and partially combusted wood fiber is separated by the multiclone and is reintroduced into the boiler firebox. After the multiclone, the uncollected fine dust and smoke particles are cleaned in an electrified filter bed (EFB) fine dust collector. In this system, the fine dust particles are given an electrostatic charge in a corona ionizer and are then deposited onto the surface of electrically polarized pea gravel. The spent pea gravel is removed from the filtration region of the EFB and is cleaned externally in a pneumatic conveyor. Dust removed from the pea gravel is filtered in a small bag filter (EFB media baghouse).

Road traffic at the facility includes trucks hauling logs to the site, trucks hauling lumber and residuals from the site, and employee vehicle traffic. Road dust emissions are controlled through paving haul roads. As shown on the site plan in Figure 2, most of the driving surfaces at the facility are paved.

**Insignificant Activities:**

Activities and emission units identified as insignificant under IDAPA.01.01.317.01(b) are listed in the Tier I Operating Permit to qualify for a permit shield.

Description	Insignificant Activities IDAPA Citation Section 317.01(b)(I)
Sawmill, Indoor	30
Sawmill Screen (Classifier), Indoor	30
Sawmill Chipper, Indoor	30
Sawdust Bin Truck Loadout	30
Sawmill Chip Bin Truck Loadout	30
Hog Fuel Transfer to Fuel House	30
Hog Fuel Truck Bin Loadout	30
Planer Chipper and Screen	30
Planer Chip Bin Truck Loadout	30
Planer Shavings Bin Truck Loadout	30
Fire Water Pump	30 (See Page 8-7)
Small Generators and Compressors	(6)

There are no monitoring, record keeping or reporting requirements for insignificant emission units or activities beyond those required in Part A (Facility-Wide Conditions) of this permit.  
[IDAPA 16.01.01.322.06]

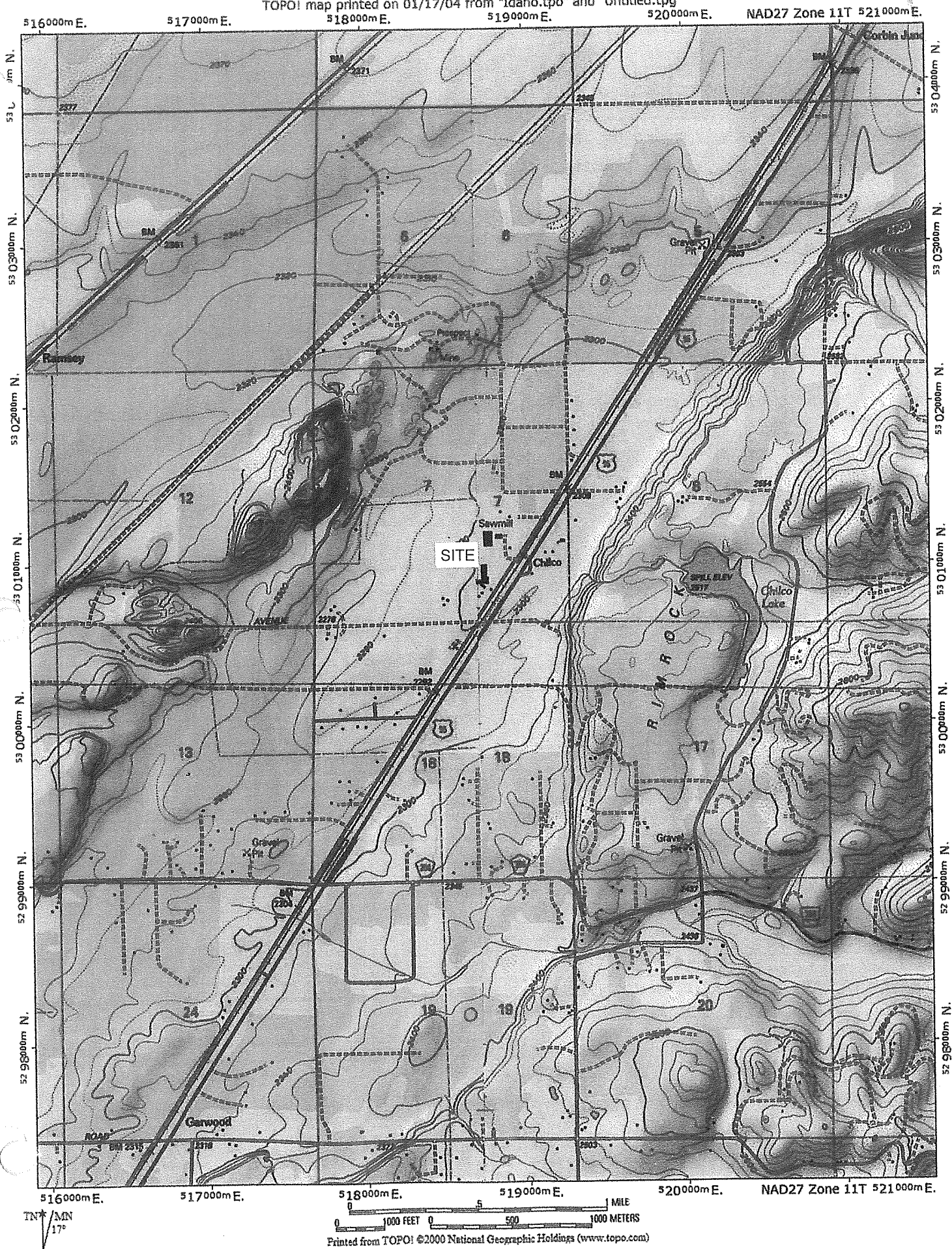
### **Process and Emitting Units:**

The following table lists the major processes at the facility with associated activities and process rates. The processes are shown in the plant flow diagram in Figure 2.

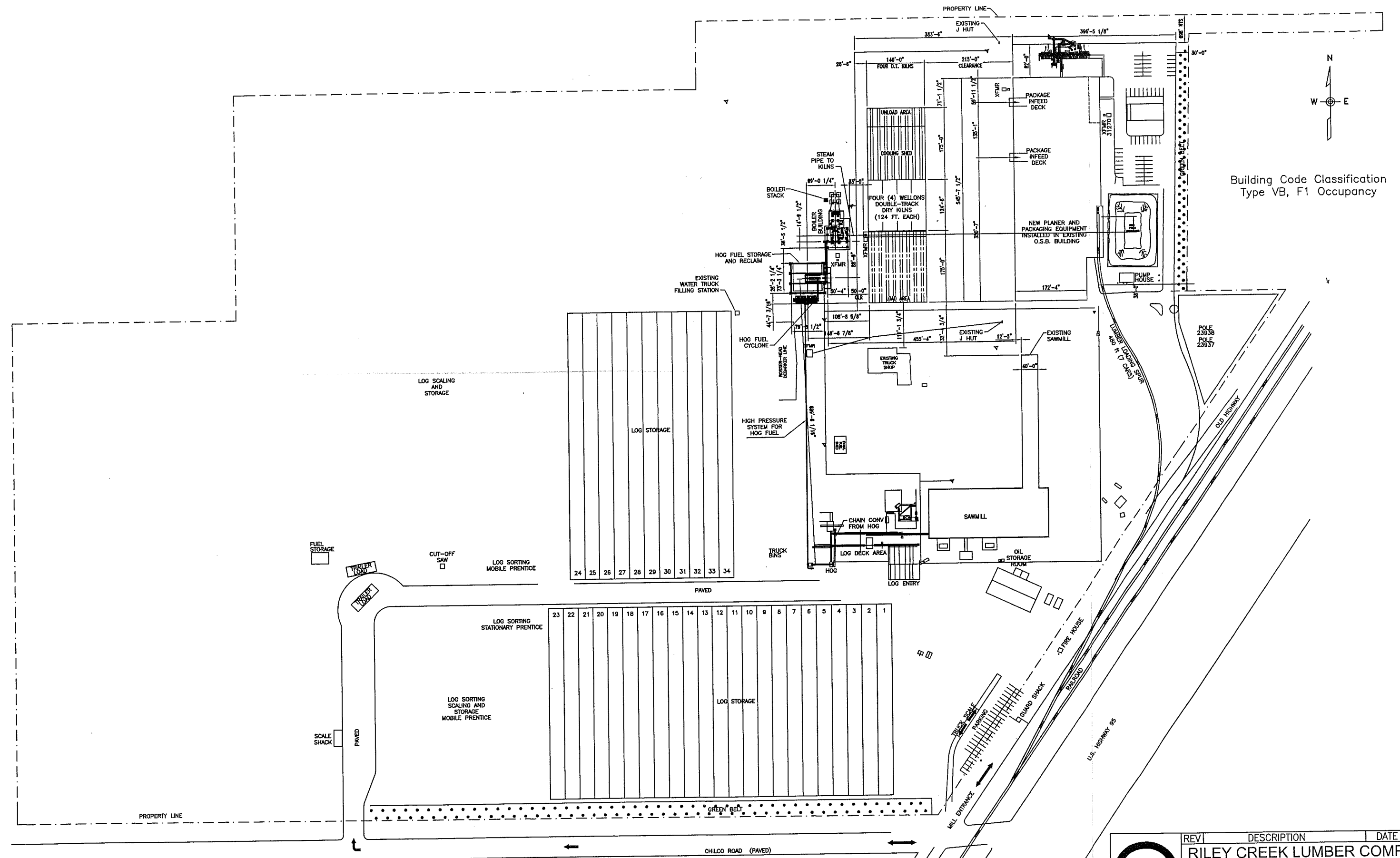
<b>Source</b>	<b>Annual Potential Process Rate</b>	<b>Permit Section</b>
Steam Plant Boiler #2 - Kipper and Sons Hog Fuel Boiler	75,000 lbs steam/hr	2 - 1
Logs and Bark Debarking Bark Hog	1,170,000 tons logs/year 234,000 tons bark/year	3 - 1 3 - 2
Sawmill Process Sawmill, Indoor Sawmill Screen, Indoor Sawmill Chipper, Indoor	325 mmbdft/year 106,144 tons sawdust/year 250,772 tons chips/year	3 - 4
Lumber Drying Dry Kilns	325 mmbdft/year	3 - 4
Planer Process, Indoor		3 - 5
Hogged Bark Handling Hog Fuel Cyclone/Filter Hog Fuel Transfer Hog Fuel Bin Truck Loadout	234,000 tons bark/year 234,000 tons bark/year 234,000 tons bark/year	7 - 1
Sawmill Sawdust Handling Sawdust Convey Sawdust Bin Truck Loadout	106,144 tons sawdust/year 250,772 tons sawdust/year	7 - 2
Sawmill Chip Handling Sawmill Chip Bin Target Box Sawmill Chip Bin Truck Loadout	250,772 tons chips/year 250,772 tons chips/year	7 - 3
Planer Chips and Shavings Handling Planer Chipper and Screen Shavings Bin Truck Loadout Planer Chip Bin Truck Loadout	48,750 tons chips/year 97,500 tons shavings/year 48,750 tons chips/year	7 - 4
Fugitive Paved Road Dust	See Spreadsheet	8 - 1
Fugitive Unpaved Road Dust	See Spreadsheet	8 - 2

FIGURE 1  
SITE LOCATION MAP

TOPO! map printed on 01/17/04 from "Idaho.tpo" and "Untitled.tpg"







Building Code Classification  
Type VB, F1 Occupancy

DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED  
REMOVE ALL BURRS & SHARP CORNERS

MACH./TOLERANCES	FAB./TOLERANCES
.XXX ± .003	± 1/16 TO 24"
.XX ± .01	± 1/8 OVER 24"
FRACTION ± 1/64	ANGLES ± 1°
ANGLES ± 1°	

DO NOT SCALE DRAWING

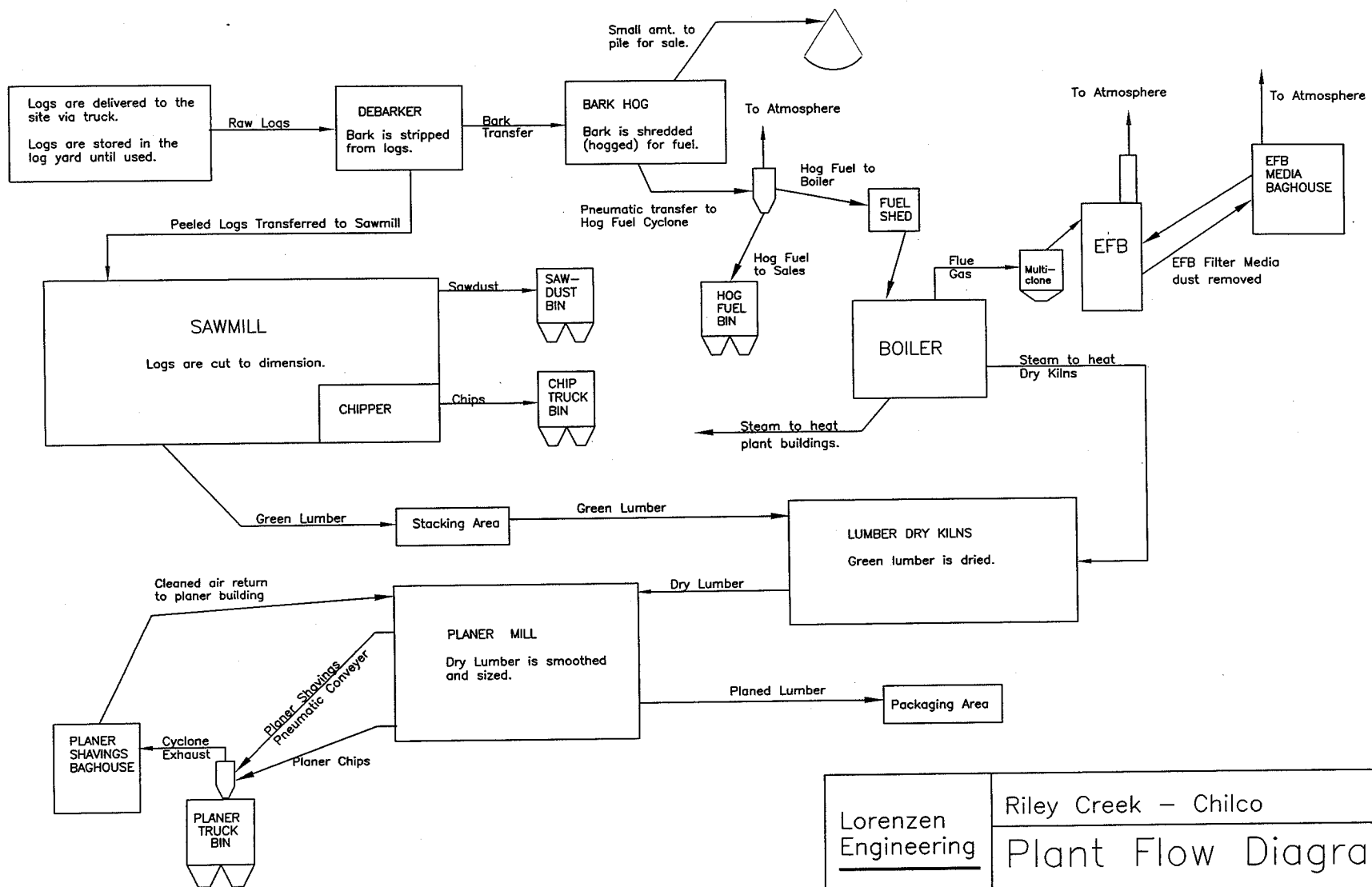
REV	DESCRIPTION	DATE	NAME
RILEY CREEK LUMBER COMPANY			
PLANER MILL PROJECT			
OVERALL SITE PLAN			

**RILEY CREEK LUMBER COMPANY**

DRAWN BY: CHICO, ATHOL, ID

DATE: DWG. NO.

SCALE: REVISION



Lorenzen Engineering	Riley Creek - Chilco			
	Plant Flow Diagram			
Drawn by: DRL	SIZE B	FSCM NO.	FIGURE 3	REV
6/6/05	SCALE None		SHEET	

## SECTION 2 - 1: FUEL BURNING EQUIPMENT

### DEQ USE ONLY

DEQ PLANT ID CODE	<input type="text"/>	DEQ PROCESS CODE	<input type="text"/>	DEQ STACK ID CODE	<input type="text"/>
DEQ BUILDING ID CODE	<input type="text"/>	PRIMARY SCC	<input type="text"/>	SECONDARY SCC	<input type="text"/>
DEQ SEGMENT CODE	<input type="text"/>				

### PART A: GENERAL INFORMATION BOILERS ARE NOT AFFECTED BY THIS PERMIT APPLICATION

PROCESS CODE OR DESCRIPTION	<input type="text" value="Hog Fuel Boiler"/>				
STACK DESCRIPTION	<input type="text" value="EFB Stack"/>				
BUILDING DESCRIPTION	<input type="text" value="Boiler Building"/>				
MANUFACTURER	<input type="text" value="Kipper and Sons"/>	MODEL	<input type="text" value="1018"/>	DATE INSTALLED	<input type="text" value="Sep. 1, 2004"/>
				DATE LAST MODIFIED	<input type="text" value="1977 (Built)"/>
					Not modified.

### RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HR	<input type="text" value="125"/>	1000 LBS STEAM/HR	<input type="text" value="75"/>	KILOWATTS	<input type="text" value="NA"/>	HORSEPOWER	<input type="text" value="NA"/>
BURNER TYPE (SEE NOTE BELOW)	<input type="text" value="01"/>	PERCENT USED FOR PROCESS	<input type="text" value="90"/>				
		PERCENT USED FOR SPACE HEAT	<input type="text" value="10"/>				

### FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (SEE NOTE BELOW)	<input type="text" value="07"/>		<input type="text"/>	
PERCENT SULFUR	<input type="text" value="0.01"/>		<input type="text"/>	
PERCENT ASH	<input type="text" value="1.13"/>		<input type="text"/>	
PERCENT NITROGEN	<input type="text" value="0.23"/>		<input type="text"/>	
PERCENT CARBON	<input type="text" value="34.49"/>		<input type="text"/>	
PERCENT HYDROGEN	<input type="text" value="3.6"/>		<input type="text"/>	
PERCENT MOISTURE	<input type="text" value="39.03"/>		<input type="text"/>	
HEAT CONTENT (BTU/UNIT)	<input type="text" value="5,457"/>	<input type="text" value="Btu/lb"/>	<input type="text"/>	<input type="text"/>
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	<input type="text" value="11.5"/>	<input type="text" value="tons/hr"/>	<input type="text"/>	<input type="text"/>
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)	<input type="text" value="88,400"/>	<input type="text" value="tons/year"/>	<input type="text"/>	<input type="text"/>

NOTES: BURNER TYPE - 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE;  
 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL);  
 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED;  
 11) OTHER (SPECIFY)

FUEL CODES - 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL  
 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST;  
 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL  
 14) PROPANE; 15) OTHER (SPECIFY)

## SECTION 2, PART B

### OPERATING DATA

#### PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

#### OPERATING SCHEDULE

HOURS/DAY	24
DAY/WEEK	7
WEEKS/YEAR	52

### POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY
TYPE	Multiclone
TYPE CODE (FROM APP. A)	077
MANUFACTURER	Not Available
MODEL NUMBER	Not Available
PRESSURE DROP (IN. OF WATER)	N/A
WET SCRUBBER FLOW (GPM)	N/A
BAGHOUSE AIR/CLOTH RATION (FPM)	N/A

#### SECONDARY

Electrified Filter Bed (EFB) w/BH
079
EFB Particulate Systems
EFB FDC 75
N/A
N/A
N/A

#### SECONDARY

EFB Media Baghouse
017
EFB Particulate Systems
Not Available
N/A
N/A

### VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	N/A
HOOD TYPE (FROM APP. B)	N/A
MINIMUM FLOW (ACFM)	N/A
PERCENT CAPTURE EFFICIENCY	N/A
BUILDING HEIGHT (FT)	30
BUILDING/AREA LENGTH (FT)	138
BUILDING/AREA WIDTH (FT)	69

### STACK DATA (EFB Stack)

GROUND ELEVATION (FT)	2306
UTM X COORDINATE (KM)	518.6
UTM Y COORDINATE (KM)	5,301.1
STACK TYPE (SEE NOTE BELOW)	02
STACK EXIT HEIGHT (FT)	85
STACK EXIT DIAMETER (FT)	4.33
STACK GAS FLOWRATE (ACFM)	42,000
STACK TEMPERATURE (DEG. F)	303

### STACK DATA (EFB Media Baghouse)

GROUND ELEVATION (FT)	2306
UTM X COORDINATE (KM)	518.6
UTM Y COORDINATE (KM)	5,301.1
STACK TYPE (SEE NOTE BELOW)	04
STACK EXIT HEIGHT (FT)	35
STACK EXIT DIAMETER (FT)	3
STACK GAS FLOWRATE (ACFM)	5,000
STACK TEMPERATURE (DEG. F)	68

### AIR POLLUTANT EMISSIONS (HOG FUEL BOILER EMITTED FROM EFB STACK)

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS		
					(LBS/HR)	(TONS/YR)	REFERENCE
PM		0.08 gr/dscf	99+	18.05	18.05	79.1	Idaho Reg.
PM <sub>10</sub>		6.93 lb/hr	99+	6.93	6.93	30.4	Permit Limit
SO <sub>2</sub>		0.025 lb/MMBtu	0	3.13	3.13	13.7	AP-42
CO		0.81 lb/1000 lb steam, 0% control		60.8	60.8	246.08	Permit Limit
NOX		0.22 lb/MMBtu	0	27.5	27.5	120	AP-42
VOC		0.062 lb/MMBtu	0	7.75	7.75	33.9	AP-42
LEAD		4.80E-05 lb/MMBtu	0	0.0002	0.006	0.026	AP-42

See following spreadsheets for HAPs emissions.

### AIR POLLUTANT EMISSIONS (EFB MEDIA BAGHOUSE)

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS		
					(LBS/HR)	(TONS/YR)	REFERENCE
PM		0.0054 gr/dscf	99+	0.23	0.23	1.0	Test Res.
PM <sub>10</sub>		0.0054 gr/dscf	99+	0.23	0.23	1.0	Permit Limit
SO <sub>2</sub>		0	--	--	--	--	--
CO		0	--	--	--	--	--
NOX		0	--	--	--	--	--
VOC		0	--	--	--	--	--
LEAD		0	--	--	--	--	--

No HAPS emissions from the EFB Media Baghouse

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

## KIPPER & SONS HOG FUEL BOILER

Controlled by EFB

Design Boiler Capacity

Permit Limit

75,000 lb steam/hr, peak hour  
69,360 lb steam/hr, 24-hour average  
16,707 dscfm @ 0% O<sub>2</sub> (2005 stack test)  
8,760 Hours/Year  
125.00 mmBtu/hr maximum  
1.67 mmBtu/1000 lb steam

### CRITERIA POLLUTANTS

TSP (controlled):

Emission Factor:

Emissions:

0.08 gr/dscf @ 8% Oxygen  
79.1 tons/year  
433.2 lbs/day  
18.05 lbs/hr

Regulatory Limit

Maximum allowed under regulatory limit.

PM10 (controlled):

Emission Factor:

Emissions:

0.08 gr/dscf @ 8% Oxygen  
30.4 tons/year  
166.3 lbs/day  
6.93 lbs/hr

Regulatory Limit

Permit Limit

Permit Limit

Sulfur Dioxide:

Emission Factor:

Emissions:

0.025 lb/mmBtu  
13.69 tons/year  
75.00 lbs/day  
3.13 lbs/hr

(AP-42 TABLE 1.6-2, Rev 9/03)

Nitrogen Oxides (NOx)

Emission Factor:

Emissions:

0.22 lb/mmBtu  
120.5 tons/year  
660.0 lbs/day  
27.50 lbs/hr

(AP-42 TABLE 1.6-2, Rev 9/03)

Volatile Organic Compounds (VOC)

Emission Factor:

Emissions:

0.062 lb/mmBtu  
33.9 tons/year  
186.0 lbs/day  
7.75 lbs/hr

Value from Sandpoint Permit

Carbon Monoxide (CO)

Emission Factor:

Emissions:

0.81 lb/1000 lb steam  
246.08 tons/year  
1,458 lbs/day  
60.75 lbs/hr

Permit Limit

Permit Limit

Lead (Pb)

Emission Factor:

Emissions:

4.80E-05 lb/mmBtu  
2.63E-02 tons/year  
1.44E-01 lbs/day  
6.00E-03 lbs/hr

(AP-42 TABLE 1.6-4, Rev 9/03)

## EFB MEDIA BAGHOUSE - POINT SOURCE

TSP :

Emission Factor:

Emissions:

5000 scf/min  
0.0054 gr/dscf  
1.9 tpy  
5.55 lbs/day  
0.23 lb/hr

Baghouse design flow.

Baghouse design emission rate.

PM10 :

Emission Factor:

Emissions:

0.0054 gr/dscf  
1.9 tpy  
5.55 lbs/day  
0.23 lb/hr

Baghouse design emission rate.

Proposed Permit Limit

Proposed Permit Limit

**KIPPER & SONS HOG FUEL BOILER**  
**HAZARDOUS AIR POLLUTANTS (HAPS)**  
ONE TYPICAL HAPS CALCULATION IS SHOWN; A TABLE OF HAPS CALCULATIONS FOLLOWS

Formaldehyde  
Emission Factor: 4.40E-03 lb/mmBtu (AP-42 TABLE 1.6-3, Rev 9/03)  
Emissions: 2.41 tons/year  
13.20 lbs/day  
0.55 lbs/hr

Operating Parameters:  
Potential Hours of Operation 8,760 hours/yr  
Max Heat Input 125.0 mmBtu / hr  
Annual Boiler Heat Input 1,095,000 mmBtu / yr

Emission Factors:		Potential Emissions:	
AP-42 Ch.1.6, Tables 1.6-3 and 1.6-4 (9/03) emission factors	Emission Factor (lb/mmBtu)	Potential Emissions (lb/hr)	Total Annual Emissions (tons/yr)
Acetaldehyde	8.30E-04	1.04E-01	4.54E-01
Acetophenone	3.20E-09	4.00E-07	1.75E-06
Acrolein	4.00E-03	5.00E-01	2.19E+00
Benzene	4.20E-03	5.25E-01	2.30E+00
Benzo(a)pyrene	2.60E-06	3.25E-04	1.42E-03
bis(2-ethylhexyl)phthalate	4.70E-08	5.88E-06	2.57E-05
Bromomethane (methyl bromide)	1.50E-05	1.88E-03	8.21E-03
2-Butanone (MEK)	5.40E-06	6.75E-04	2.96E-03
Carbon tetrachloride	4.50E-05	5.63E-03	2.46E-02
Chlorine	7.90E-04	9.88E-02	4.33E-01
Chlorobenzene	3.30E-05	4.13E-03	1.81E-02
Chloroform	2.80E-05	3.50E-03	1.53E-02
Chloromethane (Methyl Chloride)	2.30E-05	2.88E-03	1.26E-02
1,2-Dichloroethane	2.90E-05	3.63E-03	1.59E-02
Dichloromethane (Methylenechloride)	2.90E-04	3.63E-02	1.59E-01
1,2-Dichloropropane (Propylene dichloride)	3.30E-05	4.13E-03	1.81E-02
Ethylbenzene	3.10E-05	3.88E-03	1.70E-02
Formaldehyde	4.40E-03	5.50E-01	2.41E+00
Hydrogen chloride	1.90E-02	2.38E+00	1.04E+01
Methanol	N/A	0.00E+00	0.00E+00
Naphthalene	9.70E-05	1.21E-02	5.31E-02
4-Nitrophenol	1.10E-07	1.38E-05	6.02E-05
Pentachlorophenol	5.10E-08	6.38E-06	2.79E-05
Phenol	5.10E-05	6.38E-03	2.79E-02
Polycyclic Organic Matter (POM)	2.89E-06	3.61E-04	1.58E-03
Benzo(a)anthracene	6.50E-08		
Benzo(a)pyrene	2.60E-06		
Benzo(b)fluoranthene	1.00E-07		
Benzo(k)fluoranthene	3.60E-08		
Indeno(1,2,3-cd)pyrene	8.70E-08		
Styrene	1.90E-03	2.38E-01	1.04E+00
2,3,7,8-Tetrachlorodibenzo-p-dioxins	8.60E-12	1.08E-09	4.71E-09
Toluene	9.20E-04	1.15E-01	5.04E-01
1,1,1-Trichloroethane (Methyl Chloroform)	3.10E-05	3.88E-03	1.70E-02
2,4,6-Trichlorophenol	2.20E-08	2.75E-06	1.20E-05
Vinyl Chloride	1.80E-05	2.25E-03	9.86E-03
o-Xylene	2.50E-05	3.13E-03	1.37E-02
Antimony	7.90E-06	9.88E-04	4.33E-03
Arsenic	2.20E-05	2.75E-03	1.20E-02
Beryllium	1.10E-06	1.38E-04	6.02E-04
Cadmium	4.10E-06	5.13E-04	2.24E-03
Chromium, total	2.10E-05	2.63E-03	1.15E-02
Chromium, hexavalent	3.50E-06	4.38E-04	1.92E-03
Cobalt	6.50E-06	8.13E-04	3.56E-03
Lead	4.80E-05	6.00E-03	2.63E-02
Manganese	1.60E-03	2.00E-01	8.76E-01
Mercury	3.50E-06	4.38E-04	1.92E-03
Nickel	3.30E-05	4.13E-03	1.81E-02
Selenium	2.80E-06	3.50E-04	1.53E-03
TOTAL HAPS			21.11

**TOXIC AIR POLLUTANTS (TAPS)**  
These compounds are not HAPS.

Emission Factors:		Potential Emissions:		
AP-42 Ch.1.6, Tables 1.6-3 and 1.6-4 (9/03) emission factors	TAP Class (A/B)	Emission Factor (lb/mmBtu)	Potential Emissions (lb/hr)	Total Annual Emissions (tons/yr)
Acetone	B	1.90E-04	2.38E-02	1.04E-01
2-Chlorophenol	B	2.40E-08	3.00E-06	1.31E-05
Crotonaldehy	B	9.90E-06	1.24E-03	5.42E-03
Copper	B	4.90E-05	6.13E-03	2.68E-02
Molybdenum	B	2.10E-06	2.63E-04	1.15E-03
Phosphorus	B	2.70E-05	3.38E-03	1.48E-02
Silver	B	1.70E-03	2.13E-01	9.31E-01
Tin	B	2.30E-05	2.88E-03	1.26E-02
Vanadium	B	9.80E-07	1.23E-04	5.37E-04
Yttrium	B	3.00E-07	3.75E-05	1.64E-04
Zinc	B	4.20E-04	5.25E-02	2.30E-01
				208.05
				0.03
				10.84
				53.66
				2.30
				29.57
				1861.50
				25.19
				1.07
				0.33
				459.90

## SECTION 3-1: PROCESS AND MANUFACTURING OPERATIONS

### DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING ID CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Debarking				
STACK DESCRIPTION	NONE				
BUILDING DESCRIPTION	NONE				
MANUFACTURER		MODEL		DATE INSTALLED	1995
				DATE LAST MODIFIED	Not modified.

### PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	raw logs			1,170,000	tons/year
PRODUCT OUTPUT	peeled logs				
BYPRODUCT OUTPUT	bark			234,000	tons/year
RECYCLE	NA				

### POTENTIAL HAPS IN PROCESSING STREAMS

HAPS DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
None					

# SECTION 3-1, PART B, DEBARKING

## OPERATING DATA PERCENT PRODUCTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

## OPERATING SCHEDULE, TYPICAL

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

## POLLUTION CONTROL EQUIPMENT

PARAMETER

PRIMARY

SECONDARY

TYPE

NONE

NONE

TYPE CODE (FROM APP. A)

MANUFACTURER

MODEL NUMBER

PRESSURE DROP (IN. OF WATER)

WET SCRUBBER FLOW (GPM)

BAGHOUSE AIR/CLOTH RATION (FPM)

## VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?

N/A

HOOD TYPE (FROM APP. B)

N/A

MINIMUM FLOW (ACFM)

N/A

PERCENT CAPTURE EFFICIENCY

N/A

BUILDING HEIGHT (FT)

N/A

BUILDING/AREA LENGTH (FT)

N/A

BUILDING/AREA WIDTH (FT)

N/A

## STACK DATA

GROUND ELEVATION (FT)

2,306

UTM X COORDINATE (KM)

518.8

UTM Y COORDINATE (KM)

5,300.8

STACK TYPE (SEE NOTE BELOW)

05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)

N/A

STACK EXIT DIAMETER (FT)

N/A

STACK EXIT GAS FLOWRATE (ACFM)

N/A

STACK EXIT TEMPERATURE (DEG. F)

## AIR POLLUTANT EMISSIONS

POLLUTANT

CAS NUMBER

EMISSION  
FACTOR  
(SEE BELOW)

PERCENT  
CONTROL  
EFFICIENCY

ESTIMATED OR  
MEASURED  
EMISSIONS  
(LBS/HR)

ALLOWABLE EMISSIONS

(LBS/HR)

(TONS/YR)

REFERENCE

PM

0.02 lb/ton

2.67

2.67

11.7

AIRS

PM<sub>10</sub>

0.011 lb/ton

1.47

1.47

6.44

AIRS

SO<sub>2</sub>

CO

NOX

VOC

LEAD

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.



## SECTION 3-2: PROCESS AND MANUFACTURING OPERATIONS

### DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING ID CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Bark Hog				
STACK DESCRIPTION	NONE				
BUILDING DESCRIPTION	NONE				
MANUFACTURER		MODEL		DATE INSTALLED	1995
				DATE LAST MODIFIED	Not modified.

### PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	bark			234,000	tons/year
PRODUCT OUTPUT	hogged bark			234,000	tons/year
WASTE OUTPUT	none				
RECYCLE	NA				

### POTENTIAL HAPS IN PROCESSING STREAMS

HAPS DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
None					

# SECTION 3-2, PART B, BARK HOG

## OPERATING DATA PERCENT PRODUCTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

## OPERATING SCHEDULE, TYPICAL

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

## POLLUTION CONTROL EQUIPMENT

### PARAMETER

### PRIMARY

### SECONDARY

### TYPE

Enclosure

NONE

### TYPE CODE (FROM APP. A)

### MANUFACTURER

### MODEL NUMBER

### PRESSURE DROP (IN. OF WATER)

### WET SCRUBBER FLOW (GPM)

### BAGHOUSE AIR/CLOTH RATION (FPM)

## VENTILATION AND BUILDING/AREA DATA

### ENCLOSED (Y/N)?

N/A

### HOOD TYPE (FROM APP. B)

N/A

### MINIMUM FLOW (ACFM)

N/A

### PERCENT CAPTURE EFFICIENCY

N/A

### BUILDING HEIGHT (FT)

N/A

### BUILDING/AREA LENGTH (FT)

N/A

### BUILDING/AREA WIDTH (FT)

N/A

## STACK DATA

### GROUND ELEVATION (FT)

2,306

### UTM X COORDINATE (KM)

518.5

### UTM Y COORDINATE (KM)

5,300.8

### STACK TYPE (SEE NOTE BELOW)

05

### STACK EXIT HEIGHT FROM GROUND LEVEL (FT)

N/A

### STACK EXIT DIAMETER (FT)

N/A

### STACK EXIT GAS FLOWRATE (ACFM)

N/A

### STACK EXIT TEMPERATURE (DEG. F)

## AIR POLLUTANT EMISSIONS

### POLLUTANT

### CAS NUMBER

### EMISSION FACTOR (SEE BELOW)

### PERCENT CONTROL EFFICIENCY

### ESTIMATED OR MEASURED EMISSIONS (LBS/HR)

### ALLOWABLE EMISSIONS

### (LBS/HR)

### (TONS/YR)

### REFERENCE

PM

0.01 lb/ton

90%

0.27

0.27

1.17

AIRS

PM<sub>10</sub>

0.005 lb/ton

90%

0.13

0.13

0.59

AIRS

SO<sub>2</sub>

CO

NOX

VOC

LEAD

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

## LOGS AND BARK, FUGITIVE EMISSIONS

### DEBARKER

1,170,000 Tons of Logs/Year  
8,760 Hours/Year

TSP:	Emission Factor:	0.02 lbs/ton	AIRS 3-07-008-01
	Emissions:	11.70 tons/year	
		64.11 lbs/day	
		2.67 lbs/hr	
PM10:	Emission Factor:	0.011 lbs/ton	AIRS 3-07-008-01
	Emissions:	6.44 tons/year	
		35.26 lbs/day	
		1.47 lbs/hr	

### BARK HOG

234,000 Tons of Bark/Year

TSP:	Emission Factor:	0.01 lbs/ton	General Material Handling Factor
	Emissions:	1.17 tons/year	Bark Hog will be enclosed, 90% control.
		6.41 lbs/day	
		0.27 lbs/hr	
PM10:	Emission Factor:	0.005 lbs/ton	General Material Handling Factor
	Emissions:	0.59 tons/year	Bark Hog will be enclosed, 90% control.
		3.21 lbs/day	
		0.13 lbs/hr	

### HOG FUEL TRANSFER TO FUEL HOUSE

187,200 Tons of Bark/Year  
80% of total bark, assumed

TSP:	Emission Factor:	0.1 lbs/ton	General Material Handling Factor
	Control from Enc.	80% Fuel House Enclosed on three sides.	
	EF Corrected	0.02 lbs/ton	
	Emissions:	2.34 tons/year	
		12.82 lbs/day	
		0.53 lbs/hr	
PM10:	Emission Factor:	0.05 lbs/ton	General Material Handling Factor
	Control from Enc.	80% Fuel House Enclosed on three sides.	
	EF Corrected	0.01 lbs/ton	
	Emissions:	1.17 tons/year	
		6.41 lbs/day	
		0.27 lbs/hr	

### HOG FUEL CYCLONE/FILTER

Design Capacity  
Annual max. 6000 scf/min flowrate  
50 ton per hour, capacity  
234,000 ton per year

TSP:	Emission Factor:	0.015 gr/dscf	Idaho DEQ, Permit Calculations
	Emissions:	2.03 tpy	
		11.11 lbs/day	
		0.46 lb/hr	
PM10:	Emission Factor:	0.011 gr/dscf	Idaho DEQ, Permit Calculations
	Emissions:	1.49 tpy	
		8.15 lbs/day	
		0.34 lb/hr	

### HOG FUEL BIN TRUCK LOADOUT

46,800 Tons of Hog Fuel per Year  
20% of total bark, assumed

TSP:	Emission Factor:	0.05 lbs/ton	Idaho DEQ Factor.
	Emissions:	1.17 tons/year	Sides of loadout blocked from wind, 50% control.
		6.41 lbs/day	
		0.27 lbs/hr	
PM10:	Emission Factor:	0.025 lbs/ton	Idaho DEQ Factor.
	Emissions:	0.59 tons/year	Sides of loadout blocked from wind, 50% control.
		3.21 lbs/day	
		0.13 lbs/hr	

## SECTION 3-3: PROCESS AND MANUFACTURING OPERATIONS

### DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING ID CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Sawmill -- Sawmill, Sawmill Screen (classifier) and Sawmill Chipper				
STACK DESCRIPTION	NONE				
BUILDING DESCRIPTION	Sawmill Building				
MANUFACTURER	Various	MODEL	Various	DATE INSTALLED	1995
				DATE LAST MODIFIED	Not modified.

### PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	peeled logs			1,170,000	tons/year
PRODUCT OUTPUT	green lumber			325,000	mbdft/yr
BYPRODUCT OUTPUT	chips			250,792	tons/year
BYPRODUCT OUTPUT	sawdust			106,144	tons/year

### POTENTIAL HAPS IN PROCESSING STREAMS

HAPS DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
None					

# SECTION 3-3, PART B, SAWMILL

## OPERATING DATA PERCENT PRODUCTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

## OPERATING SCHEDULE, TYPICAL

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

## POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	Enclosure	NONE
TYPE CODE (FROM APP. A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (IN. OF WATER)		
WET SCRUBBER FLOW (GPM)		
BAGHOUSE AIR/CLOTH RATION (FPM)		

## VENTILATION AND BUILDING/AREA DATA (SAWMILL)

ENCLOSED (Y/N)?	Y
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	99
BUILDING HEIGHT (FT)	36
BUILDING/AREA LENGTH (FT)	289
BUILDING/AREA WIDTH (FT)	115

## STACK DATA

GROUND ELEVATION (FT)	2,306
UTM X COORDINATE (KM)	518.6
UTM Y COORDINATE (KM)	5,301.0
STACK TYPE (SEE NOTE BELOW)	05
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	N/A
STACK EXIT DIAMETER (FT)	N/A
STACK EXIT GAS FLOWRATE (ACFM)	N/A
STACK EXIT TEMPERATURE (DEG. F)	

## AIR POLLUTANT EMISSIONS (SAWMILL)

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM		0.0035 lb/ton logs	99%	0.47	0.47	2.05	Idaho DEQ
PM <sub>10</sub>		0.002 lb/ton logs	99%	0.27	0.27	1.17	Idaho DEQ

## AIR POLLUTANT EMISSIONS (SCREEN)

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM		0.01 lb/ton chips	90%	0.29	0.29	1.25	Idaho DEQ
PM <sub>10</sub>		0.005 lb/ton chips	90%	0.14	0.14	0.63	Idaho DEQ

## AIR POLLUTANT EMISSIONS (CHIPPER)

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	(TONS/YR)	REFERENCE
PM		0.01 lb/ton chips	90%	0.29	0.29	1.25	Idaho DEQ
PM <sub>10</sub>		0.005 lb/ton chips	90%	0.14	0.14	0.63	Idaho DEQ

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

## SAWMILL PROCESSES

### SAWMILL, INDOOR

1,170,000 Tons of Logs/Year

TSP:	Emission Factor:	0.35 lbs/ton	Idaho Factor Indoors with pneumatic dust pickup. 99% removal efficiency.
	Corrected Factor:	0.0035 lbs/ton	
	Emissions:	2.05 tons/year 11.22 lbs/day 0.47 lbs/hr	
PM10:	Emission Factor:	0.2 lbs/ton	Idaho Factor Indoors with pneumatic dust pickup. 99% removal efficiency.
	Corrected Factor:	0.002 lbs/ton	
	Emissions:	1.17 tons/year 6.41 lbs/day 0.27 lbs/hr	

### SAWMILL SCREEN (CLASSIFIER), INDOOR

250,792 Tons of Chips/Year

TSP:	Emission Factor:	0.1 lbs/ton	General Material Handling Factor Enclosed process, 90% control.
	Corrected Factor:	0.01 lbs/ton	
	Emissions:	1.25 tons/year 6.87 lbs/day 0.29 lbs/hr	
PM10:	Emission Factor:	0.05 lbs/ton	General Material Handling Factor Enclosed process, 90% control.
	Corrected Factor:	0.005 lbs/ton	
	Emissions:	0.63 tons/year 3.44 lbs/day 0.14 lbs/hr	

### SAWMILL CHIPPER, INDOOR

250,792 Tons of Chips/Year

TSP:	Emission Factor:	0.1 lbs/ton	General Material Handling Factor Enclosed process, 90% control.
	Corrected Factor:	0.01 lbs/ton	
	Emissions:	1.25 tons/year 6.87 lbs/day 0.29 lbs/hr	
PM10:	Emission Factor:	0.05 lbs/ton	General Material Handling Factor Enclosed process, 90% control.
	Corrected Factor:	0.005 lbs/ton	
	Emissions:	0.63 tons/year 3.44 lbs/day 0.14 lbs/hr	

## SECTION 3-4: PROCESS AND MANUFACTURING OPERATIONS

### DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING ID CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Lumber Drying Kilns		
STACK DESCRIPTION	Multiple roof vents.		
BUILDING DESCRIPTION	Four kilns with common walls.		
MANUFACTURER		MODEL	
		DATE INSTALLED	Sep-04
		DATE LAST MODIFIED	Not modified.

### PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	green lumber			325,000	mbdft/yr
PRODUCT OUTPUT	dry lumber			325,000	mbdft/yr
WASTE OUTPUT	none				
RECYCLE	NA				

### POTENTIAL HAPS IN PROCESSING STREAMS

HAPS DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
None					

# SECTION 3-4, PART B, LUMBER DRYING KILNS

## OPERATING DATA

PERCENT PRODUCTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

## OPERATING SCHEDULE, TYPICAL

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

## POLLUTION CONTROL EQUIPMENT

PARAMETER

PRIMARY

SECONDARY

TYPE

None

NONE

TYPE CODE (FROM APP. A)

MANUFACTURER

MODEL NUMBER

PRESSURE DROP (IN. OF WATER)

WET SCRUBBER FLOW (GPM)

BAGHOUSE AIR/CLOTH RATION (FPM)

## VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?

N/A

HOOD TYPE (FROM APP. B)

N/A

MINIMUM FLOW (ACFM)

N/A

PERCENT CAPTURE EFFICIENCY

N/A

BUILDING HEIGHT (FT)

N/A

BUILDING/AREA LENGTH (FT)

N/A

BUILDING/AREA WIDTH (FT)

N/A

## STACK DATA (KILN VENTS)

GROUND ELEVATION (FT)

2,306

UTM X COORDINATE (KM)

518.6

UTM Y COORDINATE (KM)

5,301.1

STACK TYPE (SEE NOTE BELOW)

05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)

27.5

STACK EXIT DIAMETER (FT)

2.5

STACK EXIT GAS FLOWRATE (ACFM)

15,000

STACK EXIT TEMPERATURE (DEG. F)

170

## AIR POLLUTANT EMISSIONS

POLLUTANT

CAS NUMBER

EMISSION  
FACTOR  
(SEE BELOW)

PERCENT  
CONTROL  
EFFICIENCY

ESTIMATED OR  
MEASURED  
EMISSIONS  
(LBS/HR)

ALLOWABLE EMISSIONS

(LBS/HR)

(TONS/YR)

REFERENCE

PM

0.11 lb/mbdft

0%

4.08

4.08

17.9

ORCAA

PM<sub>10</sub>

0.11 lb/mbdft

0%

4.08

4.08

17.9

ORCAA

SO<sub>2</sub>

CO

NOX

VOC

0.82 lb/mbdft

0%

30.4

30.4

133

U of O

LEAD

HAPS

See Spreadsheet

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.



## LUMBER DRY KILNS

325,000 mbdf/yr, lumber dried

### CRITERIA POLLUTANTS

PM: Emission Factor: 0.11 lbs/1000 bd.ft. ORCAA Dry Kiln Factor\*  
Emissions: 17.88 tons/year  
97.95 lbs/day  
4.08 lbs/hr

PM10: Emission Factor: 0.11 lbs/1000 bd.ft. ORCAA Dry Kiln Factor\*  
Emissions: 17.88 tons/year  
97.95 lbs/day  
4.08 lbs/hr

\* ORCAA is the Olympic Region Clear Air Agency, previously known as the Olympic Air Pollution Control Authority.

VOC: Emission Factor: 0.82 lbs/1000 bd.ft. OSU Dry Kiln VOC Study  
Emissions: 133.09 tons/year VOC Emissions based on  
729.25 lbs/day mix shown below.  
30.39 lbs/hr

Wood Species:	% of Total	(lb/MBdf)	Weighted (lb/MBdf)	
Redwood	0%	0.12	0.00	
Cedar	0%	0.12	0.00	
Douglas Fir Sap Wood	0%	0.21	0.00	
Hemlock	0%	0.24	0.00	
Coastal Douglas Fir	0%	0.34	0.00	
Grand Fir	30%	0.53	0.16	HF: Western Hemlock and Grand Fir
* White Fir	0%	0.26	0.00	ES/LP/AF: Englemann Spruce, Lodgepole Pine and Alpine Fir = WW or whitewood
* Douglas Fir Heart Wood	30%	0.46	0.14	FL: Douglas Fir and Western Larch
* Ponderosa Pine	30%	1.38	0.41	PP: Ponderosa Pine only
* Lodgepole Pine	10%	1.08	0.11	(one third of ES/LP/AF)
Sugar Pine		2.07	0.00	
White Pine	0%	2.26	0.00	
Other	0%	1.50	0.00	
Total	100%		0.82	

\* Factors from 2000 Milota OSU/IFA study. VOCs as carbon lb/mbf

### HAZARDOUS AIR POLLUTANTS (HAPS)

PHENOL: Emission Factor: 0.004 lbs/1000 bd.ft. ORCAA Dry Kiln Factor\*  
Emissions: 0.65 tons/year  
3.56 lbs/day  
0.15 lbs/hr

METHANOL: Emission Factor: 0.06 lbs/1000 bd.ft. OSU Dry Kiln VOC Study  
Emissions: 9.75 tons/year Methanol emissions based on  
53.42 lbs/day mix shown below.  
2.23 lbs/hr

FORMALDEHYDE: Emission Factor: 0.004 lbs/1000 bd.ft. OSU Dry Kiln VOC Study  
Emissions: 0.65 tons/year Formaldehyde emissions based on  
3.56 lbs/day mix shown below.  
0.148 lbs/hr

Wood Species:	% of Total	(lb/MBdf)	Methanol Weighted	(lb/MBdf)	Formaldehyde Weighted
Grand Fir**	30%	0.023	0.007	0.001	0.0003
* White Fir	0%	0.122	0.000	0.003	0.0000
* Douglas Fir Heart Wood	30%	0.023	0.007	0.001	0.0003
* Ponderosa Pine	30%	0.065	0.020	0.003	0.0009
* Lodgepole Pine	10%	0.060	0.006	0.004	0.0004
Other	0%	0.060	0.000	0.060	0.0000
Total	100%		0.039		0.0019

\* factors from 2000 Milota OSU/IFA study. VOCs as carbon lb/mbf

\*\* Use Douglas Fir factor for Grand Fir

## SECTION 3-5: PROCESS AND MANUFACTURING OPERATIONS

### DEQ USE ONLY

DEQ PLANT ID CODE		DEQ PROCESS CODE		DEQ STACK ID CODE	
DEQ BUILDING ID CODE		PRIMARY SCC		SECONDARY SCC	
DEQ SEGMENT CODE					

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Planer Processes - Indoors				
STACK DESCRIPTION	No Stacks. All processes located indoors or vented indoors.				
BUILDING DESCRIPTION	Planer Building				
MANUFACTURER	Various	MODEL	Various	DATE INSTALLED	Sep-04
				DATE LAST MODIFIED	Not modified.

### PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	dry lumber			325,000	mbdft/yr
PRODUCT OUTPUT	planed lumber			325,000	mbdft/yr
BYPRODUCT OUTPUT	planer chips			48,750	tons
BYPRODUCT OUTPUT	planer shavings			97,500	tons

### POTENTIAL HAPS IN PROCESSING STREAMS

HAPS DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
None					

### SECTION 3-5, PART B, PLANER PROCESS

#### OPERATING DATA

PERCENT PRODUCTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

#### OPERATING SCHEDULE, TYPICAL

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

#### POLLUTION CONTROL EQUIPMENT

##### PARAMETER

##### TYPE

##### TYPE CODE (FROM APP. A)

##### MANUFACTURER

##### MODEL NUMBER

##### PRESSURE DROP (IN. OF WATER)

##### WET SCRUBBER FLOW (GPM)

##### BAGHOUSE AIR/CLOTH RATION (FPM)

##### PRIMARY

None

##### SECONDARY

NONE

#### VENTILATION AND BUILDING/AREA DATA

##### ENCLOSED (Y/N)?

##### HOOD TYPE (FROM APP. B)

##### MINIMUM FLOW (ACFM)

##### PERCENT CAPTURE EFFICIENCY

##### BUILDING HEIGHT (FT)

##### BUILDING/AREA LENGTH (FT)

##### BUILDING/AREA WIDTH (FT)

N/A
N/A
N/A
N/A
N/A
N/A
N/A

#### STACK DATA

##### GROUND ELEVATION (FT)

##### UTM X COORDINATE (KM)

##### UTM Y COORDINATE (KM)

##### STACK TYPE (SEE NOTE BELOW)

##### STACK EXIT HEIGHT FROM GROUND LEVEL (FT)

##### STACK EXIT DIAMETER (FT)

##### STACK EXIT GAS FLOWRATE (ACFM)

##### STACK EXIT TEMPERATURE (DEG. F)

2,306
518.6
5,301.1
na
na
na
na
na

#### AIR POLLUTANT EMISSIONS

##### PLANER, INDOOR

There are no emissions from the planers because they are pneumatically controlled through the shavings transport system.

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS		
					(LBS/HR)	(TONS/YR)	REFERENCE
PM							
PM <sub>10</sub>							
SO <sub>2</sub>							
CO							
NOX							
VOC							
LEAD							

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

## SECTION 7-1: SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

### DEQ USE ONLY

DEQ PLANT ID CODE	<input type="text"/>	DEQ PROCESS CODE	<input type="text"/>	DEQ STACK ID CODE	<input type="text"/>
DEQ BUILDING ID CODE	<input type="text"/>	PRIMARY SCC	<input type="text"/>	SECONDARY SCC	<input type="text"/>
DEQ SEGMENT CODE	<input type="text"/>				

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	Hogged Bark Handling		
STACK DESCRIPTION	Hog Fuel Cyclone/Filter Vents		
BUILDING DESCRIPTION			
DATE INSTALLED	Oct-04	DATE LAST MODIFIED	NA
MATERIAL DESCRIPTION	Hogged Bark		

### MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	50
NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NA
NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	187,200
UNITS OF MEASURE	tons/year

### BELT CONVEYOR/VEHICLE TRANSFER - None. Bark is transported pneumatically.

NUMBER OF TRANSFERS	<input type="text"/>	MATERIAL MOISTURE CONTENT (WEIGHT PERCENT)	<input type="text"/>	MAXIMUM HOURLY WIND SPEED (MPH)	<input type="text"/>
CONVEYORS ENCLOSED? (Y/N)	<input type="checkbox"/>	CONVEYORS IN BUILDINGS? (Y/N)	<input type="checkbox"/>	AVERAGE HOURLY WIND SPEED (MPH)	<input type="text"/>
TRANSFERS ENCLOSED? (Y/N)	<input type="checkbox"/>	TRANSFERS IN BUILDINGS? (Y/N)	<input type="checkbox"/>		

### PNEUMATIC CONVEYOR TRANSFERS -- Hog Fuel Cyclone/Filter

MATERIAL MOISTURE CONTENT (WEIGHT PERCENT)	45%	PRIMARY SEPARATOR PERCENT EFFICIENCY	80%
PRIMARY SEPARATOR TYPE	Cyclone	SECONDARY SEPARATOR PERCENT EFFICIENCY	99.5%
SECONDARY SEPARATOR TYPE	Filter		

### MATERIAL STORAGE DATA -- Hog Fuel Bin, Estimate 20% of hog fuel goes to truck fuel bin.

PILE? (Y/N)	N	STORAGE CAPACITY	45 Units	PILE LENGTH (FT)	NA
SILO? (Y/N)	Y	STORAGE CAPACITY UNITS	200 ft <sup>3</sup> /unit	PILE WIDTH (FT)	NA
OTHER STORAGE TYPE DESCRIPTION				PILE HEIGHT (FT)	NA

### MATERIAL STORAGE DATA -- Hog Fuel House, Estimate 80% of hog fuel goes to fuel house.

PILE? (Y/N)	N	STORAGE CAPACITY	1,000	PILE LENGTH (FT)	NA
SILO? (Y/N)	Y	STORAGE CAPACITY UNITS	tons	PILE WIDTH (FT)	NA
OTHER STORAGE TYPE DESCRIPTION -- Building used to house fuel for boiler.				PILE HEIGHT (FT)	NA

### MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NONE		
NONE		
NONE		
NONE		
NONE		
NONE		

# SECTION 7-1, PART B, HOGGED BARK HANDLING

## OPERATING DATA PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

## OPERATING SCHEDULE

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

## POLLUTION CONTROL EQUIPMENT

### PARAMETER

### TYPE

### TYPE CODE (FROM APP. A)

### MANUFACTURER

### MODEL NUMBER

### PRESSURE DROP (IN. OF WATER)

### WET SCRUBBER FLOW (GPM)

### BAGHOUSE AIR/CLOTH RATION (FPM)

### PRIMARY

Cyclone
075
Western Pneumatics
72
unknown
na
na

### SECONDARY

Filter
018
Western Pneumatics
unknown
na
6.36:1

## VENTILATION AND BUILDING/AREA DATA

### ENCLOSED (Y/N)?

### HOOD TYPE (FROM APP. B)

### MINIMUM FLOW (ACFM)

### PERCENT CAPTURE EFFICIENCY

### BUILDING HEIGHT (FT)

### BUILDING/AREA LENGTH (FT)

### BUILDING/AREA WIDTH (FT)


## STACK DATA

### GROUND ELEVATION (FT)

### UTM X COORDINATE (KM)

### UTM Y COORDINATE (KM)

### STACK TYPE (SEE NOTE BELOW)

### STACK EXIT HEIGHT FROM GROUND LEVEL (FT)

### STACK EXIT DIAMETER (FT)

### STACK EXIT GAS FLOWRATE (ACFM)

### STACK EXIT TEMPERATURE (DEG. F)

2,305
518.6
5,301.0
04
80
2.26
6,000
68

## AIR POLLUTANT EMISSIONS

See calculations on page 3-5.

AIR POLLUTANT EMISSIONS				ALLOWABLE EMISSIONS			
See calculations on page 3-5.		EMISSION FACTOR	PERCENT CONTROL	ESTIMATED OR MEASURED EMISSIONS	(LBS/HR)	(TONS/YR)	REFERENCE
POLLUTANT	CAS NUMBER	(SEE BELOW)	EFFICIENCY				
				(LBS/HR)			
PM	HOG FUEL CYCLONE/FILTER	0.015 gr/dscf	99+%	0.46	0.43	1.6	Idaho DEQ
		0.011 gr/dscf	99+%	0.34	0.34	1.49	Idaho DEQ
PM <sub>10</sub>							

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

## SECTION 7-2: SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

### DEQ USE ONLY

DEQ PLANT ID CODE	<input type="text"/>	DEQ PROCESS CODE	<input type="text"/>	DEQ STACK ID CODE	<input type="text"/>
DEQ BUILDING ID CODE	<input type="text"/>	PRIMARY SCC	<input type="text"/>	SECONDARY SCC	<input type="text"/>
DEQ SEGMENT CODE	<input type="text"/>				

### PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION

STACK DESCRIPTION

BUILDING DESCRIPTION

DATE INSTALLED

MATERIAL DESCRIPTION

Sawmill Sawdust Handling	
Sawdust Bin Target Box	
1995	DATE LAST MODIFIED NA
Sawdust	

### MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)

UNITS OF MEASURE

unknown
na
106,144
tons/year

### BELT CONVEYOR/VEHICLE TRANSFER - None. Sawdust is transported pneumatically.

NUMBER OF TRANSFERS

MATERIAL MOISTURE  
CONTENT (WEIGHT PERCENT)

MAXIMUM HOURLY  
WIND SPEED (MPH)

CONVEYORS ENCLOSED? (Y/N)

CONVEYORS IN BUILDINGS? (Y/N)

AVERAGE HOURLY  
WIND SPEED (MPH)

TRANSFERS ENCLOSED? (Y/N)

TRANSFERS IN BUILDINGS? (Y/N)

### PNEUMATIC CONVEYOR TRANSFERS -- Sawdust Bin Vent Target Box

MATERIAL MOISTURE CONTENT (WEIGHT PERCENT)

PRIMARY SEPARATOR TYPE

SECONDARY SEPARATOR TYPE

45%
Target Box

PRIMARY SEPARATOR PERCENT EFFICIENCY

SECONDARY SEPARATOR PERCENT EFFICIENCY

99+%

### MATERIAL STORAGE DATA -- Sawdust truck bin.

PILE? (Y/N)

SILO? (Y/N)

OTHER STORAGE TYPE DESCRIPTION

STORAGE CAPACITY

STORAGE CAPACITY UNITS

45 Units
200 ft <sup>3</sup> /unit

PILE LENGTH (FT)

PILE WIDTH (FT)

PILE HEIGHT (FT)

NA
NA
NA

### MATERIAL DATA

HAP DESCRIPTION

HAP CAS  
NUMBER

HAP FRACTION IN  
MATERIAL BY WEIGHT

NONE
NONE
NONE
NONE
NONE
NONE
NONE



# SECTION 7-2, PART B, SAWDUST HANDLING

## OPERATING DATA PERCENT FUEL CONSUMPTION PER QUARTER

DEC-FEB	25
MAR-MAY	25
JUN-AUG	25
SEP-NOV	25

## OPERATING SCHEDULE

HOURS/DAY	16
DAY/WEEK	7
WEEKS/YEAR	52

## POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY
TYPE	Target Box
TYPE CODE (FROM APP. A)	
MANUFACTURER	Field Erected
MODEL NUMBER	na
PRESSURE DROP (IN. OF WATER)	na
WET SCRUBBER FLOW (GPM)	na
BAGHOUSE AIR/CLOTH RATION (FPM)	na

## SECONDARY

None

## VENTILATION AND BUILDING/AREA DATA

ENCLOSED (Y/N)?	
HOOD TYPE (FROM APP. B)	
MINIMUM FLOW (ACFM)	
PERCENT CAPTURE EFFICIENCY	
BUILDING HEIGHT (FT)	
BUILDING/AREA LENGTH (FT)	
BUILDING/AREA WIDTH (FT)	

## STACK DATA

GROUND ELEVATION (FT)	2,303
UTM X COORDINATE (KM)	518.8
UTM Y COORDINATE (KM)	5,300.8
STACK TYPE (SEE NOTE BELOW)	02
STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	37
STACK EXIT DIAMETER (FT)	1.21
STACK EXIT GAS FLOWRATE (ACFM)	6,000
STACK EXIT TEMPERATURE (DEG. F)	68

## AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR (SEE BELOW)	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
<b>SAWDUST BIN VENT TARGET BOX</b>							
PM		0.1 lb/ton	na	1.21	1.21	5.31	Idaho DEQ
PM <sub>10</sub>		0.05 lb/ton	na	0.63	0.63	2.65	Idaho DEQ
<b>SAWDUST BIN TRUCK LOADOUT</b>							
PM		0.05 lb/ton	50%	0.61	0.61	2.65	Idaho DEQ
PM <sub>10</sub>		0.025 lb/ton	50%	0.30	0.30	1.33	Idaho DEQ

NOTE: STACK TYPE - 01) DOWNWARD; 02) VERTICAL (UNCOVERED); 03) VERTICAL (COVERED); 04) HORIZONTAL; 05) FUGITIVE  
EMISSION FACTOR IN LBS/UNITS. PLEASE USE SAME HOURLY UNITS GIVEN IN FUEL DATA SECTION.

# SECTION 7-3: SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

## DEQ USE ONLY

DEQ PLANT ID CODE   
 DEQ BUILDING ID CODE   
 DEQ SEGMENT CODE

DEQ PROCESS CODE   
 PRIMARY SCC

DEQ STACK ID CODE   
 SECONDARY SCC

## PART A: GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION  
 STACK DESCRIPTION  
 BUILDING DESCRIPTION  
 DATE INSTALLED  
 MATERIAL DESCRIPTION

Sawmill Chip Handling  
 Chip Bin Vent Target Box  
 1995 DATE LAST MODIFIED NA  
 Green Chips

## MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)   
 NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)   
 NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)   
 UNITS OF MEASURE

## BELT CONVEYOR/VEHICLE TRANSFER - None. Chips are transported pneumatically.

NUMBER OF TRANSFERS  MATERIAL MOISTURE CONTENT (WEIGHT PERCENT)   
 CONVEYORS ENCLOSED? (Y/N)  CONVEYORS IN BUILDINGS? (Y/N)   
 TRANSFERS ENCLOSED? (Y/N)  TRANSFERS IN BUILDINGS? (Y/N)   
 MAXIMUM HOURLY WIND SPEED (MPH)   
 AVERAGE HOURLY WIND SPEED (MPH)

## PNEUMATIC CONVEYOR TRANSFERS -- Chip Bin Vent Target Box

MATERIAL MOISTURE CONTENT (WEIGHT PERCENT)   
 PRIMARY SEPARATOR TYPE   
 SECONDARY SEPARATOR TYPE   
 PRIMARY SEPARATOR PERCENT EFFICIENCY   
 SECONDARY SEPARATOR PERCENT EFFICIENCY

## MATERIAL STORAGE DATA -- Chip truck bin.

PILE? (Y/N)  STORAGE CAPACITY   
 SILO? (Y/N)  STORAGE CAPACITY UNITS   
 OTHER STORAGE TYPE DESCRIPTION   
 PILE LENGTH (FT)   
 PILE WIDTH (FT)   
 PILE HEIGHT (FT)

## MATERIAL DATA

HAP DESCRIPTION  
 NONE  
 NONE  
 NONE  
 NONE  
 NONE  
 NONE

HAP CAS  
 NUMBER

HAP FRACTION IN  
 MATERIAL BY WEIGHT